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INVESTMENT, PRICES, BUDGET AND FINANCE

GLUSHKOV ON WHOLESALE PRICE REVISION

Moscow EKONOMICHESKAYA GAZETA in Russian No 17, Apr 80 pp 7-8

[Article by N. T. Glushkov, Chairman of the State Committee for Prices, USSR, under rubric "Improvement of the Economic Mechanism": "The Working Out of New Wholesale Prices"]

[Text] In the measures carried out by the party and government to improve the economic mechanism, an important role is assigned to improving planned pricing.

The planned price of manufactured and agricultural output and consumer goods, the rates for electrical and thermal-electric energy and for all types of transportation, housing, and communal-everyday services act as norms for expenditures and profitability and the foundations for the cost-accounting activity of the enterprises and organizations. At the same time price is an element of man's everyday life and exerts an effect upon the formation of consumer demand.

At the recently held All-Union Conference on Questions of Pricing, a complete analysis was made of the work of improving planned pricing in conformity with the decree of the CPSU Central Committee and the USSR Council of Ministers, entitled "Improving the Planning and Intensifying the Effect of the Economic Mechanism Upon Increasing the Effectiveness of Production and the Quality of Work." The conference participants mentioned the paths for improving that work for the successful implementation of the party's economic policy. Extended recommendations in that direction were adopted at the conference.

Wholesale Prices and Rates in Industry

In the system of planning pricing, a special place is occupied by wholesale prices and rates in industry. They directly affect the financial and economic activities of the ministries and departments, and the associations and enterprises, primarily cost accounting, profitability, and economic incentives. Wholesale prices are used in the sale of more than two-thirds of the gross national product, the annual volume of which has exceeded one trillion rubles.

In conformity with the decree of the CPSU Central Committee and the USSR Council of Ministers dealing with the improvement of the economic mechanism, the decision was adopted:

-- to carry out, by a deadline prior to 1 April 1981, the overall reconsideration of the wholesale prices of manufactured output and the rates for electrical and thermal-electric energy, with the purpose in mind of having them go into effect on 1 January 1982, with the simultaneous recomputation of all the planned indices;

-- to increase the role of wholesale prices and rates in the providing of economic incentives for scientific-technical progress, the strictest economizing of fuel and energy resources, ferrous and nonferrous metals, and raw and other materials, and improving the quality of output, and also to reflect more completely in the prices the socially necessary expenditures to produce it;

-- to carry out the improvement of the wholesale prices and rates in industry while being guided by the instruction issued by Comrade L. I. Brezhnev, to the effect that the chief trend must be the reduction of wholesale prices through a reduction of the material and labor expenditures for production, the reduction of the production costs, and the carrying out of other measures aimed at achieving high profitability and effectiveness.

The necessity of reconsidering the wholesale prices and rates arose primarily because the existing wholesale prices and rates in industry, which were formed for the most part on the basis of 1967 prices, have become greatly obsolete, fail to reflect the changes that have occurred in the structure of production and the placement of the productive forces, and fail to correspond to present-day conditions of production and sale.

The improvement of the economic mechanism requires the putting of the wholesale prices in conformity with the socially necessary expenditures for production of output and with the new conditions of organization of cost accounting and incentives.

The latest reconsideration of the wholesale prices and rates is also caused by the increase in the production costs, especially in the production of coal, petroleum, and ore, and also of logging operations, which increase is, for the most part, caused by natural and geological factors. In addition, the excessively high profitability in a number of branches and subbranches lessens the self-interestedness of the associations and enterprises in the carrying out of economy measures or in reducing the production costs, and hinders the renovation of the output and the improvement of its quality.

For purposes of guaranteeing the stability of wholesale prices and rates, their reconsideration subsequently should be carried out, as a rule, no less frequently than once every five years.

The improvement of the wholesale prices includes, first of all, the preparation and conducting of the reconsideration of the prices and the technical-norm documentation on the basis of progressive norms for labor-intensity, power resources, metal intensity, and other expenditures; secondly, the elaboration and approval of net-output norms as a component part of the wholesale prices; and thirdly, the carrying out of individual measures to reinforce the effect of prices upon increasing the effectiveness of production and the quality of output.

At the present time, the first stage is coming to an end. That is the stage that is linked with the elaboration of new price lists for the output of the fuel-and-energy and raw-material branches. New price lists have been approved for coal, petroleum and products of petroleum processing, gas, electrical and thermal-electric energy, ore-type raw materials, coke, refractory materials, and logs. In April-May the elaboration and approval of prices of ferrous and nonferrous metals, rolled metal and pipes, chemical ouput, lumber, and many other products are supposed to be completed. That creates the basis for changing over to the second stage -- the completion of the preparation of price lists for output of the processing branches and machine-building.

By way of an exception, new wholesale prices are being introduced, effective 1 January 1981, in the radioelectronic branches of industry, which are considerably reduced as compared with the existing level, including for the Ministry of the Electronic Industry by more than 20 percent.

A large amount of attention was devoted to preparing price lists for the output of the fuel-and-power complex, particularly for coal. The prices of coal are strongly influenced by the natural and transportation factors, which manifest themselves unevenly in the various parts of the country. Therefore, although there has been an improvement in the territorial differentiation of prices, there still remain 43 price zones. The prices of Donetsk coal remain the highest. These types of coal are 80 percent more expensive than the Kuznetsk types.

The highest profitability in the new prices is foreseen for Ekibastuz and Kansk-Achinsk coal, where that profitability is twice the average norm for the branch. These types of coal are the most effective, and the prices of them are one-sixth to one-fifth the prices of other power coal varieties.

The establishment of the economically substantiated ratios of prices of interchangeable types of fuel was a complicated problem. We proceeded from the hypothesis that the formal equalizing of the prices of coal, gas, and mazut is not desirable. Consumers operating according to cost accounting must have a self-interestedness in the use of cheap coal varieties or progressive types of fuel and in the process of reconsidering the price lists must strive for a situation in which the prices actively affect the rationalization of the regional structure of production and consumption of fuel. Therefore, in the coal branch prices free on rails - c.i.f. station of consignee have been retained.

A large amount of work preceded the approval of the rates for electrical and thermal-electric energy. USSR State Committee for Prices, jointly with USSR Ministry of Power and Electrification, considered 16 versions of the draft version of the price list. A special program based on economic mathematics and carried out on an electronic computer was developed for the purpose of considering them.

Within the framework of the existing organizational-financial system, USSR Ministry of Power and Electrification succeeded in reducing the number of rate zones for electrical energy; this will make it possible to eliminate the unjustified differences in the rates in related energy systems. Conditions have been guaranteed for the profitable operation of all energy systems.

The regionalization of rates was carried out with a consideration of guaranteeing the favorable conditions for the development of the power-intensive production entities in regions with highly-effective fuel and energy resources. In the country's central regions, the average weighted double-rate tariff will be 18 kopecks for 10 kilowatt-hours, and in Krasnoyarsk and Bratsk, 8.5 kopecks. Approximately the same rates have been established in the other energy systems that consume Ekibastuz and Kansk-Achinsk coal varieties.

A number of changes have been made in the structure itself for the two-rate tariffs for electrical energy. These changes are aimed at providing an incentive for the economizing of energy. There has been a substantial increase in the cost of a kilowatt-hour and the payment for capacity that participates in electrical loads has been differentiated.

When questions concerning the prices of ferrous and nonferrous metals were being considered, a large amount of attention was devoted to the more complete extraction of useful components from the ores and to the use of prices to provide incentives for the production of high-quality output.

The draft version of the price list for the output of ferrous metallurgy provides for the use of incentives in production and the consumption of the most effective types of rolled metal and the replacement of types that are in short supply, as well as a relative reduction in the prices of sheet metal as compared with shaped. The gap between them will be 20-25 percent. This will provide an incentive for the use in machine-building and construction of the most progressive and most economical technology -- welding and stamping.

According to the new price list, the metallurgists will receive payment from the metal consumers on the basis of the actual quality of the delivered output, even in the event that that quality exceeds that which was ordered by the consumer. Therefore USSR Gossnab must carry out in a more substantiated manner the assignment of consumers to the metallurgical plants, with a consideration of their technological capabilities, and the consumers must efficiently use the quality of the metal and reduce the metal-intensity of the articles.

Although the prices of ferrous metals have been increased by 20 percent and will guarantee the profitability of approximately 13 percent for assets and 17 percent for production costs, USSR Ministry of Ferrous Metallurgy must taken additional steps to ascertain and use the existing production reserves, especially at the ferrous-metallurgy enterprises in Ukrainian SSR, where even with this increase in prices, a low profitability or loss at individual enterprises will be retained.

In nonferrous metallurgy, provision is made for a considerable increase in the prices of aluminum, copper, cobalt, tin, tungsten, molybdenum, and certain other metals, and this will guarantee a profitability on a level of 13-14 percent.

In the chemical and petrochemical industry, with the reconsideration of the wholesale prices:

-- there is a considerable reduction in the prices of polymer materials (synthetic rubber, from 10 to 40 percent; synthetic resins and plastics), the products of their processing, and other highly profitable types of output;

- provision is made for the more complete accounting in the prices of the consumer properties and the creation of incentives for the production and use of effective types of output (concentrated and complex fertilizers, highly effective means of protecting plants, new types of plastics, high-quality lacquer-and-paint materials and dyes);

-- a single level or substantiated ratios are established in the prices of comparable chemical output. Incentives are provided for the replacement of types of raw and other materials which are in short supply, particularly edible raw materials, by synthetic ones.

The reconsideration of the wholesale prices of synthetic resins and plastics has not yet been completed. According to preliminary information, the level of wholesale prices is being substantially reduced for the base grades of polyethylene as much as 20 percent; for polyethylene film, from 20 to 50 percent; elastic foam polyurethane, as much as 20 percent; and polyamides, as much as 20 percent.

The work that has already been carried out by the pricing agencies creates the basis for changing over to the second stage -- the completion of the preparation of the price lists for the output of the processing branches and machine-building. The persons who have been preparing these price lists have, for the most part, been provided with the initial data for computing the new production costs with a consideration of the influence exerted by the change in the prices of the consumed fuel and raw and other materials.

Net-output Norms

A peculiarity of the preparation of the price lists in the branches of machine-building and certain other branches for which the draft versions of price lists will be submitted is the fact that, parallel with the prices, net-output norms are also being developed.

USSR Gosplan and USSR State Committee for Prices have defined a list of the basic branches which, effective 1 January 1982, are to be changed over to the application, in planning, of the index of the normative net output. These include completely the branches of machine-building, irrespective of the department to which they belong, and also USSR Ministry of Timber and Wood Processing Industry, Ministry of Pulp and Paper Industry, USSR Ministry of Construction Materials Industry, and USSR Ministry of Food Industry. A question being considered is the question of the application of the index of normative net output in other branches, for example, in ferrous metallurgy and in industry at the republic level of subordination.

The elaboration of the draft versions of the net-output norms is being carried out simultaneously with the planned prices on the basis of uniform branch production estimates being worked out by the production associations, enterprises, NII [scientific-research institutes], and construction-planning organizations of the ministries and departments, and the progressive technical-economic norms, including for labor-intensity.

Of course, the changeover from the experimental verification of the NChP [net-output norm] to the planned introduction of that index evokes many new questions. They include the connection between the branch norms and the enterprise norms; problems of reducing the labor-intensity and materials-intensity of production; problems of equal advantageousness, of providing incentives for technical progress, and many others. It is necessary to determine whether it is necessary to employ in absolutely all branches the index of the normative net output. For example, in USSR Ministry of Light Industry at the present time the question of the advantages of the normative cost of processing is being studied.

In addition to conducting a reconsideration of prices and the creation of norms for net output, the decree of the CPSU Central Committee and the USSR Council of Ministers stipulates a number of special steps to intensify the effect exerted by wholesale prices upon increasing the effectiveness of production and the quality of output. First of all, there has been an increase in the incentive role of markups onto the wholesale prices for new highly effective output and there has been an expansion of the practice of employing rebates on the prices for articles in the second category of quality.

Under conditions of stable prices within the operating limits of the five-year plan there can be formed an excessive, economically unsubstantiated

profitability for the producers. Therefore USSR State Committee for Prices, after coordination with USSR Gosplan and USSR Ministry of Finance,, for purposes of regulating the level of profitability will reconsider the wholesale prices of individual types of output only for its manufacturers. For consumers, the existing prices as of the beginning of the planning period will be retained.

One of the most important trends in improving wholesale prices is the intensification of the role played by prices in reducing the materials-intensity of the output being produced, and in the expansion of the use of inexpensive types of raw and other materials. Now, when one uses inexpensive types of materials in production, as compared with those currently used, while keeping the quality of the output at the previous level, the wholesale prices remain unchanged until the end of the five-year plan. The amount of profit obtained from the sale of the previously produced (replaced) output is also retained, but that amount cannot be lower than the profitability norm that has been established for the corresponding group of output.

It is necessary to intensify the role of limit prices in increasing the responsibility borne by the customers, developers, and manufacturers for the economical substantiation of the expenditures for the new output, and also in carrying out control over the development and placement into production of highly effective machinery and equipment.

Prices in the Agrarian-Industrial Complex

The introduction, effective 1 January 1982, of wholesale prices and rates in industry cannot fail to have an effect upon the economics of agriculture. Therefore the CPSU Central Committee and the government have pledged to guarantee complete compensation to agriculture for all kinds of losses as a result of the change in wholesale prices and have retained the currently existing preferential tariffs for the production of electrical energy (one kopeck per kilowatt-hour with the new average tariff of 1.8 kopeck).

The correct, economically substantiated construction of the system of prices of producer goods and production services for agriculture, on the one hand, and the purchase prices of agricultural output, on the other, takes on especially great importance for maintaining the necessary proportionality in the development of industry and agriculture, equivalent commodity exchange, and the reinforcement of cost-accounting relations.

The two-pricelist system that is being employed, with which industry sells its output to agricultural-technology enterprises at wholesale prices, and they, in their turn, sell them to kolkhozes and sovkhozes at reduced prices, guarantees to a definite degree the compensation for the increase in the prices of industrial output supplied to rural areas. The difference in the prices is compensated from the state budget. In 1980 terms, the total amount of the subsidy exeeds 4 billion rubles. This system needs improvement. In

order to compensate for the increase in the prices of building materials, spare parts, and other producer goods to which the two-pricelist system cannot be extended, it is necessary to find another form.

Of course, it would be desirable to study additionally and completely the system of cost-accounting relations between industry and agriculture, with which the changes in the prices for industry would not be covered by subsidies from the state budget, but, rather, would be compensated for by the corresponding change in the purchase prices.

The pricing agencies and the ministries and departments are faced with important tasks in the further improvement of pricing in the direction of the greater accounting for the quality and safekeeping of agricultural output. Simultaneously it is necessary to improve the zonal differentiation of the purchase prices of agricultural output under conditions of the concentration and specialization of production, interfarm cooperatives, and agroindustrial integration. The differentiation of purchase prices must be used not only as an instrument for equalizing the income among the individual farms, but must also take into consideration the prospects for the concentration and specialization of agricultural production for the purpose of increasing the effectiveness of agriculture.

At the present time the elaboration of the most important trends for improving the planning and providing of economic incentives for the development of agriculture is coming to an end. In these trends, provision is made, in particular, for the improvement of the system of purchase prices of agricultural output.

Prices of Consumer Goods

In addition to improving the wholesale prices in heavy industry, provision has been made for an extended program of steps to improve the system of wholesale prices for consumer goods also.

For commodities produced by light industry, the desired goal, in addition to the more complete reflection in the prices of the economically substantiated expenditures for production, is to take all steps to encourage the efficient and effective use of the initial raw materials, and also to expand the production of high-grade raw materials that guarantee the improvement of the outward appearance of the finished articles and their consumer properties.

In the food industry, special attention is attached to intensifying the role of prices in increasing the self-interestedness of the enterprises in the complete use of raw materials, the complete reduction of raw-material losses at all stages of production, procurements, processing, and sale of output to the consumers.

Prices must be used to encourage the production by the enterprises in all branches of light and food industry of articles with improved quality, which correspond to the consumers' demand.

The pricing agencies and the ministries and departments of the USSR and the union republics must assure the fulfillment of the instructions issued by the party and the government to the effect that the change of wholesale prices of consumer goods is carried out while preserving the currently existing level of retail prices.

The carrying out of a policy of price stability for the basic commodities is linked with considerable expenditures from the state budget.

Every year the state allocates more than 25 billion rubles to compensate the difference between the production costs and the proceeds, based on retail prices, from the sale of such commodities as meat and meat articles, milk, fish, and children's commodities. In addition, approximately 5 billion rubles are expended to pay subsidies to the housing-and-communal economy, since the existing low rates, as a rule, are not compensated by its expenditures.

The preservation of the stable level of retail prices for the basic edible and nonedible commodities cannot mean the administrative freezing of retail prices for all commodities irrespective of the role played by individual groups of them in satisfying the public's needs, or without a consideration of the capabilities of production. It is obvious that there must be a different approach to prices of commodities for which there is a mass, daily demand, on the one hand, and individual groups of what might be called prestige commodities, on the other hand.

An important role in providing an incentive for increasing the production of consumer goods, expanding their assortment, and improving the quality in conformity with the public's demand must be played by the mechanism for the formation of temporary wholesale and retail prices of new types of commodities with improved quality, which mechanism takes into consideration the expenditures for their production and the material incentives.

As is well known, it has been decided to introduce into practice the concluding of five-year agreements between trade and industry and, when there is consent between the two sides, to establish wholesale and retail prices, as well as trade rebates, for the first experimental consignments of commodities and especially fashionable articles.

The local pricing agencies -- and, in the republics that do not have oblast subdivision, the republic-level price committees -- have been given the responsibility of registering the prices established on the basis of consent between the corresponding industrial organizations and trade, so as to prevent any violations of state price discipline.

In recent years a considerable amount of work has been carried out to improve the rates for the providing of everyday services to the public. However, in a number of republics, krays, and oblasts, certain enterprises

that provide everyday services are continuing to work at a loss, and the quality and efficiency of the services provided to the public have been improving slowly. The republic-level ministries of everyday services, and the price committees and divisions must carefully analyze the work done by these enterprises and take the necessary steps to improve the work of the enterprises and organizations in the public-services system, as well as the pricing practice.

In conformity with the 12 July 1979 decree of the CPSU Central Committee and the USSR Council of Ministers, provision is made for the retention of the currently existing rates for the shipment of freight and passengers by rail, air, sea, and river transport. The level of the existing freight rates assures the highly profitable work of the transportation organizations. For example, the profitability of the rail freight shipments constitutes approximately 60 percent of the production costs.

As for the rates for freight shipments by motor transport, it is planned to systematize them on the basis of the currently existing average level.

Simultaneously it is necessary to introduce necessary amendments into the transportation rates for the shipment of reight to short distances, with a consideration of the priority of the more effective types of transportation. These amendments must not lead to the unjustified increase in the transportation rates and, at the same time, must contribute to the increased efficiency of shipments.

Supervision Over Prices

T e pricing agencies, in fulfilling the decisions of the 25th Congress and the subsequent Plenums of the CPSU Central Committee, carried out a number of practical steps involved in intensifying all forms of supervision over the observance of state price discipline in the national economy, in improving the quality of inspections, and in improving the methods of conducting them. At the same time, the intradepartmental supervision continues to remain insufficiently effective. Therefore, violations of discipline are committed by many enterprises and organizations. Out of 7000 industrial enterprises that were inspected by pricing agencies in 1979, violations of wholesale prices were established at almost every other enterprise; millions of rubles of illegally obtained profit were recovered from those enterprises and paid into the budget. The draft versions pertaining to prices are not always sufficiently substantiated. It is necessary to make a major correction of the situation pertaining to the substantiation of prices and the observance of state price discipline.

A considerable role in reinforcing price discipline in the services sphere must be carried out by public control in the outlying areas. At the present time, more than 4500 public commissions to control the observance of prices and rates and the rules for providing services to the public have been created and are in operation.

It is necessary to continue to increase the organizing role played by the local pricing agencies in carrying out measures to stimulate and increase the effectiveness of all forms of control in industry and agriculture, in retail trade, public nutrition, and the providing of everyday services.

In 1980 we will be confronted with the exceptionally important, as well as complicated, task of completing the reconsideration of the wholesale prices and rates in industry, the resolution of which task will determine in the most immediate manner the intensification of the effect exerted by the economic mechanism upon the effectiveness of social production and the improvement of the quality of output and all our work.

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COORDINATION OF INDUSTRIAL, REGIONAL PLANNING STRESSED

Present Problems

Moscow PLANOVOYE KHOZYAYSTVO in Russian No 3, Mar 80 pp 67-76

[Article by V. Masol, deputy chairman of the UkSSR Council of Ministers, chairman UkSSR Gosplan: "Current Problems on Coordination of Industrial and Regional Planning"]

[Text] Improvement of the methods of economic management is a necessary condition in the realization of the party's economic policy, a new stage of which is connected to the decisions of the September (1965) Plenum of the CPSU Central Committee which determined the main directions of the restructuring of the economic mechanism as applied to the conditions of developed socialism and the tasks of communist construction. The adopted measures made it possible to centralize the management of sectors of the national economy, to boost the incentive of labor collectives in production results.

The process initiated in the beginnings of the 70's of creating various associations contributes to the fuller utilization of the advantages to be found in such progressive forms of public organization of production as specialization, cooperation and practical cooperation. New forms of combining sectorial and regional planning have been developed. The relations between economic, scientific-technical and social aspects of the plan have been strengthened. Realization of the measures developed by the party have contributed to the steady growth of the economic and scientific-technical potential of the country, to boosting the efficiency of public production and to the growth of the people's well-being on this basis.

But the objective requirements of the development of the national economy, its expanding scale and increasingly more complex structure and the operation of new social-political factors have made necessary further improvement of planning work among the outstanding problems of state importance. In particular, the practice of recent years has shown that side by side with the undoubted merits of the existent system of planning and management of the economy, it has not permitted in a number of cases to realize those advantages which are objectively to be found in the very nature of socialist production relations. This concerns those difficulties that are fully overcomable under our conditions which still arise in the coordination of the drafts of department plans in the compilation of complex plans of economic and social development of the republics and oblasts.

V.I. Lenin once noted: "The lack of coordinated work of different departments locally is one of the big evils hindering economic construction."[1] This condition is most pertinent in our time. With each year, it becomes increasingly more clear that without careful consideration of regional factors, without close coordination of sectorial needs with regional possibilities, it becomes increasingly difficult to achieve optimal national-economic solution. Practice has shown that no matter how well organized the planning of separate sectors and production operations might be, it does not ensure the realization of all possibilities of development of the national economy as a whole when there is no intertying of departmental and regional interests.

In recent years considerable work has been done in the Ukrainian SSR on improving regional planning and improving its combination with sectorial planning. In the Ninth Five-Year Plan there was formulated a rather orderly system of complex regional plans, a central place in which was occupied by the plan for the territory of the republic as a whole. Complex plans of economic and social development of oblasts are being developed in close coordination with it; these make it possible to assess the possibilities of a given region in regard to ensuring the development of production by means of labor and natural resources. The main indicators also apply to the territory of three economic regions—the Donetsk-Pridneprovsk, Southwestern and Southern. At the same time all the guiding threads come together in the republic complex plan; with its help, not only intersectorial but also the most important interoblast national-economic proportions are regulated.

A plan compiled for the territory of the republic as a whole serves as the chief link providing for the interrelation of statewide interests to the developmental needs of separate oblasts and rayons. It is the most important part of the whole system of regional planning and the disposition of productive forces in the USSR. This is why the successful solution of the problem of combining the sectorial and regional aspects of a plan largely depends on improvement of the organization of working it out and increased validity of the indicators of republic complex regional plans.

A new strong impulse to all planning work was given by a decree of the CPSU Central Committee "On Further Improving the Economic Mechanisms and Tasks of Party and State Organs" and a decree of the CPSU Central Committee and the USSR Council of Ministers "On Improving Planning and Increasing the Effect of the Economic Mechanism on Raising Efficiency of Production and Quality of Work" adopted in July 1979. These documents serve as a guide to the comprehensive solution of outstanding problems of managing the economy of developed socialism. Among the most important directions pointed out by the decrees of improving planning work, of primary importance are the selection of the most effective ways of achieving high end national-economic results, the rational combination of sectorial and regional planning, of long-term and current plans, improvement of intersectorial and

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1. V.I. Lenin, "Poln. sobr. soch." [Complete Works], Vol 43, p 278.

intrasectorial proportions, provision of balanced growth of the economy. In assessing concrete measures provided for the purpose of further improving the sectorial and regional aspects of the plan, it should be especially emphasized that, being different in terms of character and scale, they in the aggregate expand the rights and at the same time increase the responsibility of the councils of ministers of union republics, local soviets of people's deputies for the realization of the complex economic and social development of republics, oblasts and rayons independent of departmental subordination of associations (enterprises), construction projects and organizations located on the corresponding territory.

The successful realization of these measures requires, in our view, making more precise the competence, rights and obligations of different-level organs of management.

The decree of the CPSU Central Committee and the USSR Council of Ministers increases the responsibility of union republics for the coordination of plans of capital construction with the capacities of construction organizations and labor resources. The provision of such a balance, in our opinion, would contribute to the distribution of plan assignments for construction organizations according to the territorial principle with consideration being taken of disposition of their capacities. Furthermore, for the purpose of improving management of construction, reducing linkage [zvennost'] and increasing the responsibility of republics for the development of the production bases of construction organizations, the operational-economic activity of union-republic construction ministries is to be subordinated to the councils of ministers of union republics. For example, we might cite the Ukrainian SSR Ministry of Rural Construction, which mainly does production, housing and cultural-consumder construction in rural areas. Of the total volume of contracting work for the ministry, up to 80 percent deal with republic orders. A significant portion of this volume of work is ensured by material-technical resources, equipment and special materials for republic organizations.

The improvement of construction management will make it possible to improve the balance of five-year and annual plans of contracting work which, beginning with the 11th Five-Year Plan will be worked out and presented to Gosplan SSSR by the councils of ministers of union republics for the territory of the republic as a whole and to increase the responsibility of local operational organs for strengthening of the base of construction organizations and the fulfillment of plan targets.

The adopted decree provides a new step in the direction of expanding the powers of republic organs and local soviets relative to providing the complex development of oblasts and rayons and with respect to realization of planning and control over production output. In particular, the councils of ministers of union and autonomous republics and executive committees of kray, oblast and city soviets of people's deputies are charged with the compilation and ratification of five-year and annual plans of production of

consumer goods, plans of housing-municipal and cultural-consumer construction and also control over their fulfillment. The solution of this important task requires clear-cut interaction and coordination of the efforts of ministries and departments of varying level of subordination whose associations, enterprises and organizations are located in one or another oblast with councils of ministers of republics and local soviets.

At the same time, there still has not been worked out an optimal form of interaction of Gosplan SSSR and gosplans of union republics in regard to decisions for drafts of plans of union and union-republic ministries and departments. Union ministries and departments have so far reacted weakly to proposals of republic planning organs and have been significantly lagging in communicating their draft plans and, as a rule, after the adoption of a decision by Gosplan SSSR.

Improvement of interaction of regional and sectorial organs of management at all stages of plan development would in large degree contribute to boosting the validity of proposed decisions and acceleration of work related to their coordination at different levels of operational competence. Planning practice shows that it is necessary for all enterprises and organizations regardless of affiliation to coordinate with local planning organs individual indicators of draft plans according to sections most closely connected with local interests: production plans of consumer goods, indicators for the protection of nature, number of workers, construction of facilities of the nonproduction sphere and so on. A sufficient basis exists for increasing the role and responsibility of republic organs of planning of a number of sectors working primarily with local raw materials and basically providing for local needs (production of local construction materials, meat, dairy, light and food sectors of industry), basically concentrating this work in councils of ministers of union republics. Such a measure would contribute to improved efficiency in directing the development of these sectors and to a more rational use of their capacities and raw-material resources.

Planning of the social infrastructure also calls for improvement. Today operational relations in this sphere are quite complicated. Under conditions when practically every ministry and department has its own service-sphere institutions, local soviets of people's deputies and councils of ministers find it difficult to plan and control the development of housing-municipal services, health care, education, consumer services and other sectors and to control the processes of social-cultural services for the population.

A possible measure for the solution of this problem would be to propose a procedure wherein Gosplan SSSR would grant allocations for corresponding social-cultural sectors to councils of ministers of union republics, while questions of planning, development and approval of itemized lists for these facilities, regardless of their estimated cost, would be decided on in the republics.

Putting into practice such a principle, from our point of view, would first of all increase the responsibility of republic and local planning organs for the successful solution of social questions and for the all-round validation of the decisions adopted in this sphere. Moreover, it would permit union organs to concentrate their attention on key problems of economic and social development, freeing them from questions that could effectively and successfully be resolved by republic planning organs. This is the way the question was put at the 24th and 25th party congresses.

Adoption of the enumerated proposals would contribute, in our opinion, to a fuller realization of the decree of the CPSU Central Committee and the USSR Council of Ministers on improvement of the economic mechanism and increase the responsibility of union republics for the development of a thoroughly coordinated complex regional plan. Many of its most important social-economic indicators are being approved by the republic's Council of Ministers.

Today every oblast of the Ukrainian SSR has approved complex five-year plans of development. They contain concrete assignments of economic and cultural construction for the five-year plan broken down by years. Progress of plan fulfillment is under the constant control of local party and soviet organs and is regularly examined at plenums of obkoms of the Communist Party of the Ukraine, at meetings of ispolkoms and at sessions of soviets of people's deputies.

The integrated system of complex regional plans (herein are also included plans of local rayons and cities) provides the possibility for party and soviet organs to see the place of each rayon, oblast and republic in a unified national-economic complex of the country, to exert a planned influence on raising the level of material production and well-being of workers and to purposefully solve the tasks of further economic and social-cultural construction locally.

The major organizational and political work conducted locally by party and soviet organs on the realization of complex plans contributes to the growth of workers' initiative and makes it possible to disclose additional reserves for increasing production, to involve more fully local sources of raw materials and to utilize more efficiently available resources.

As the practice of recent years has shown, the compilation of annual complex regional plans for oblasts is of major importance to the successful fulfillment of the targets of the five-year plan. This provides the possibility of familiarizing oblast party organs and soviets of people's deputies with the solution of concrete economic tasks.

The chief task that comes to the fore in the process of working out an annual regional plan for oblasts is the determination of plan indicators for the planned year for each enterprise that are not lower than the targets set by the five-year plan for this year. This is achieved through the close

cooperation of local planning organs with the planning services of enterprises and organizations operating on the given territory at all stages of the working out of the plan. Moreover, the main provisions of a draft plan of economic and social development are widely discussed in labor collectives. Their counter proposals on drawing in unused reserves in production make it possible to increase production volume and to improve qualitative indicators. Thus, in the fourth year of the current five-year plan, the bringing in into production of additional reserves in the republic has resulted in above-plan production of consumer goods in the amount of 1,236,000,000 rubles, including non-food goods amounting to 1,120,000,000 rubles, which constitutes 110.7 percent of the established annual quotas.

Improvement of work on regional planning and the significant expansion in this of the participation of lower planning organs put on the agenda the task of a radical improvement of methodological supervision of the work and retraining of cadres. In recent years, methodological instructions for the compilation of plans of complex development of the economy of oblasts, administrative rayons and cities have been worked out in the republic and approved by Gosplan UkSSR. The local use of these documents, despite certain difficulties, constitutes an important step in the way of development of the entire system of complex regional plans and the attainment for them of methodological and methodical unity and interconnectedness.

For the retraining of cadres there have been organized permanently operating republic courses in which approximately 40 percent of the personnel of local planning organs have undergone training.

Work is being actively conducted in the direction of use of modern economic-mathematical methods and electronic computing equipment for the compilation of regional plans. An interdepartmental commission has already begun the operation of the first section of the automated system of planning calculations of Odesskaya, Donetskaya and Dnepropetrovskaya oblasts. The development of the first section of the automated system of planning calculations in L'vovskaya Oblast is on the verge of completion. Subsequently automated systems of planning calculations will be introduced in the other oblasts of the Ukraine. Taking into consideration the construction under way in the republic, the Ukrainian SSR was approved on the decision of Gosplan SSR as a base for the development and introduction of oblast automated systems of planning calculations in the country.

The concrete application of the complex-system approach to the solution of current questions of combining sectorial and regional principles of management is to be found in the development and realization of plans of social development of labor collectives side by side with complex plans of economic and social development of oblasts, rayons and cities. In recent years a great deal of attention has been paid in the republic to the formation of plans that reflect problems not only of the economic development of an enterprise or a rayon but also the rise of the cultural and vocational level of workers, improvement of labor discipline and observance of the norms

of social behavior, provision of housing and other social-everyday services and so forth. This is no accident. Complex planning of economic and social development of sectorial and regional components is aimed at an optimal solution of economic and scientific-technical tasks in their close connection with a broad spectrum of social factors. The social bent of economic policy at the present stage of public development requires maximum satisfaction of the material and spiritual needs of the population, systematic development of all sides of the socialist way of life and improvement of the social structure of Soviet society.

The realization of the pertinent program provisions of the CPSU finds its fullest reflection namely in complex plans of economic and social development of the oblast and rayon, in the social parts of departmental plans and in plans of social development of associations (enterprises) and organizations.

Today the work on social planning is of broad scope. For the first time in the practice of socialist planning, complex plans of economic and social development for a five-year period have been adopted in all 477 administrative rayons, 127 cities of oblast subordination and also the 25 oblasts of the UkSSR and the cities of Kiev and Sevastopol'. The development of complex plans of development of labor collectives has created a favorable basis for the purposeful control of social processes within the regional context. Plans of economic and social development of oblasts, rayons and cities create possibilities for the right solution of questions of rational utilization of material, labor and financial resources, protection of the natural environment and improvement of the operation of organs of public education, health care, culture and other sectors of the nonproduction sphere.

One of the most important organizational aspects of regional planning is accounting and control of fulfillment of the basic provisions of the complex plan.

Progressive experience in the compilation and realization of plans of economic and social development of rayons and cities attests to the major importance of propagandizing them and the importance of studying the responding reaction of the population to the measures of the plan for their successful implementation. Analysis of feedback provides the possibility of studying the importance of measures included in the plan and of directing and uniting work of public organizations and the whole population in the solution of the most important tasks. At the same time, the practice of compilation and implementation of plans of economic and social development of labor collectives, rayons, cities and oblasts attests to the big reserves to be found in raising the quality and effectiveness of complex plans. First of all this is an improvement of forms and methods of organizational-methodological guidance in regard to their compilation and realization. A significant role in the accomplishment of this work has been assigned to the Scientific Methods Center of Gosplan USSR and the UkSSR Academy of Sciences for Planning of Economic and Social Development of Collectives, Rayons, Cities and

Oblasts, which was created on the instructions of the republic's directive organs. It has the responsibility of determining assignments for scientific organizations of the republic in regard to the preparation of methodological recommendations for the development of complex plans, consideration and generalization of the results of research on this problem, rendering of organizational-methodological assistance in the development of such plans to republic and local regional organs of control and to industrial enterprises.

The successful solution of the problem of coordinating sectorial and regional planning of development of public production is not just connected to the clear-cut assignment of rights and responsibilities for different levels of economic management. It is just as important to constant improve the content and methods of development of complex plans of economic and social development in their regional aspect. In this connection, it would be difficult to overestimate the importance of compiling regional balances of production and distribution of the most important types of products as provided by a decree of the CPSU Central Committee and the USSR Council of Ministers. Such balances make it possible to not only determine schemes of optimal freight traffic volume for bulk cargo but also to plan more soundly regional national-economic proportions and to improve the disposition of productive forces.

One of the most important substantive elements of complex regional plans are bound to be large regional programs which now have to be provided with capital-construction consolidated plans. The decree increases the responsibility of councils of ministries of union republic USSR ministries and departments and the USSR Academy of Sciences for the development of such programs. It appears that that a first-priority task here is comprehensive validation of the list of regional programs with consideration of their scale and priority; moreover, many of them can be designated as basic for real'zations even under the conditions of such an economically developed territory as the Ukrainian SSR.

The Ukraine today has a highly developed economy with an already existing arrangement of productive forces and with established production interrelations while being at the same time an indivisible part of the country's unified national-economic complex.

Large regional-production complexes function on the territory of the republic. Take the Krivoy-Rog complex, which is based on the deposits of iron ore of iron ore of the Krivoy-Rog basin, the Donets and the Sredne-Pridneprovsk metallurgical complex, which is supplied with coal from the Donbas and iron ore from Krivoy-Rog basin and others. Regional-production complexes are also being formed in the field of machine building.

The republic has agroindustrial complexes in operation—sugar-beet, animal-husbandry, fruit-and-vegetable, wine-making and others involving the use of large resources of agricultural raw materials and a powerful production apparatus intended for their processing.

Health-resort regions are widely known; they have come into existence because of favorable climatic conditions of the Azov-Black Sea coast, the Ukrainian Carpathians and other resort centers (Mirgorod in Poltavskaya Oblast, Khmel'nik in Vinnitskaya Oblast and Morshin and Truskavets in L'vovskaya Oblast).

The created industrial and agroindustrial regional-production complexes, like the health-restorative areas of Ukrainian SSR, while occupying relatively small territories, represent a rather high relative share in the country's economy in terms of volume of production and services.

At the same time, the good economic and natural conditions are not being used fully in all of them. Even on the scale of the republic as a whole, a number of important problems will have to be solved in the immediate years ahead. Thus, the exacerbation of the problem of providing the national economy with labor resources at a time when there is still a relatively high share of persons engaged in various kinds of manual labor increasingly turns the attention of republic organs to the development and systematic implementation of a program of mechanization and automation of operations performed manually for the purpose of releasing a portion of the workers and subsequently redistributing them among the sectors.

Another big program on the scale of the republic could become a complex of measures for the protection and rational use of water resources, the shortage of which in connection with the growing intensiveness of water consumption in industry, agriculture and everyday life shows a tendency to increase.

The implementation of a broad program of use of atomic energy has been started in the republic has been started as the composite part of an all-union program. Its realization is closely connected with the existing and prospective disposition of productive forces and with the protection of the environment. In particular, new generating capacities are being created in the southwest and south of the republic, which do not have their own resources of traditional energy carriers.

Certain intrarepublic regional programs deserve attention. For example, there could be created on the coast of the Black and Azov seas almost a continuous resort-tourist area with a sprinkling of large port and industrial centers specializing in conversion and processing of imported and export products. Reserves exist as well for a significant expansion of an area of irrigation farming. Favorable living conditions make it possible to attract here the necessary labor resources.

Specific conditions are to be found in Polesskiy Rayon, which possesses low-productive land with adequate moisture. Here labor resources and a rather developed road system exist. The rayon has an advantageous economic-geographic position. In addition to chemicalization and land improvement for agriculture, there could be included forming of new industrial centers and subrayons with their industrial structure showing the predominance of

nonmetal-intensive sectors of machine building and metalworking and food, light and woodworking, glass and china-pottery industries, permitting fuller use of local resources.

The development and realization of large regional programs requires precise organization of work and the uniting of efforts of many ministries and departments, local soviets and also scientific-research institutions.

The time is now ripe for the job of refining the methodological principles and organizational conditions of developing regional plans of the complex development of the economy of republics and oblasts for the purpose of boosting their effectiveness and active role in the overall system of planned management of the national economy. It is important to prepare methodological elaborations on improvement of sections and indicators of proper regional plans on the basis of the chief economic developmental task of public production. It would also be practicable to work out methods of close interaction and coordination of regional planning organs with organs of sectorial management under whose jurisdiction are enterprises located on the territory of the oblast or rayon.

The methodological instructions for the working out of territorial plans within the framework of oblasts, administrative rayons and cities operative in the Ukrainian SSR and other republics are distinguished both as to scientific level and as to scope of indicators, as each republic compiled them independently. Moreover, they are not obligatory in regard to fulfillment by union ministries and departments. It would therefore be useful to systematize basic principles for the development of methodological instructions and other normative acts relating to the compilation of regional plans that would be obligatory for all ministries, departments and also statistical organs.

A great deal is to be done in regard to closer coordination of departmental-sectorial and regional interests in such a difficult matter as the disposition of productive forces.

In particular, the urgency persists of the problem of coordination of the development of industrial enterprises belonging to different ministries and departments from the viewpoint of scale, specialization, reequipment of production, protection of the environment, as well as the development of facilities of housing-municipal services, everyday services, health care and education. The most important questions of coordination of the scale of development of the production of different industries located in a given region include planning of their growth from the standpoing of availability of manpower and a higher coefficient of use of equipment. No less urgent are the other economic and social problems arising in connection with the growth of cities.

There should especially be pointed out the timeliness of introducing a limit to the numbers of workers and employees among the approved indicators

of five-year and annual economic and social development plans. It is necessary here to take into consideration that the problem of labor resources has become exacerbated not only in connection with an objectively developed demographic situation but also because a continuing and difficult to regulate growth of large cities under conditions of inadequate utilization of resources in a number of small and medium-size cities. At the same time, many difficulties are due to deficiencies in the existent method of evaluating the effectiveness of capital investments. In particular, one could not consider a situation legitimate where outlays of past years on the preparation of a territory and the creation on it of a production and social infrastructure are not taken into account in the determination and effectiveness of one-time expenditures on the erection of industrial hubs and centers. One also cannot but help take into consideration outlays in coming years for the compensation of losses from the estrangement of productive agricultural lands. Both in the one and the other case, enterprises located in large centers with a developed infrastructure can only initially find themselves in a preferred position with respect to indicators of economic efficiency compared to enterprises built in small built-up areas or newly developed regions. Gosplan UkSSR is implementing measures to restrain the desire of ministries and departments to locate new facilities in already established industrial centers because all large cities are experiencing a shortage of labor resources, and difficulties have arisen in the development of municipal services.

The establishment of enterprises in small built-up areas or rayons makes it possible to reduce worker-cadre turnover, to increase labor discipline and to eliminate other negative consequences connected with excessive growth of large industrial centers.

The high level of economic development of the territory of the republic and the large relative share of energy-intensive and water-intensive sectors in the structure of industry have resulted in the fact that the shortage of not only labor but also certain kinds of natural resources (especially fuel-energy, water, land, forest) has served as a limiting factor in the growth of Ukrainian productive resources today. Under such conditions, the fulfillment of the party's program goal of expanding the volume of production, raising its efficiency and improving production quality and ensuring growth of the people's well-being can only be achieved with intensive factors of development and more rational utilization of available resources.

This presumes the solution, in addition to what has been enumerated, of such problems as the creation of suburban agricultural zones, the organization of industrial production operations for the satisfaction of the needs of rayons, the organization of places of recreation for the population, rational use and protection of the environment, reproduction of natural resources and much else. All of them can be most effectively solved primarily at rayon, oblast and republic levels.

Regional planning organs both at the center and locally should with the effective support of soviets of people's deputies employ in all fullness the rights granted by the USSR Constitution, the constitutions of the union republics and other legislative acts to achieve a more active state, extradepartmental approach to the disposition of productive forces and to the solution of the most important social-economic tasks. In the study of such departmental plans as create, intensify or fail to solve the problem of resource shortage and do not take into consideration the interests of other departments whose enterprises are located or are designated for location in the same rayon and also finally do not take into account the interests of the population of the latter or the needs of the local economy, preference should be given to the position of councils of ministers of union republics and local soviets of people's deputies.

Improvement of regional planning at the present stage requires a more active use of numerous preplan documents: schemes for the development and location of productive forces, schemes and drafts of rayon plans, resettlement schemes, development and location of individual sectors of the national economy, general development plans of cities and so on. Up to the present time these documents, on whose preparation considerable funds are being spent and the highly skilled labor of scientists, planners and engineers, are used very weakly in planning for a number of reasons (lack of necessary interconnection, nonobligatory accounting in the process of adoption of decisions and so on).

This is why important significance is to be attached to those provisions of the decree of the CPSU Central Committee and the USSR Council of Ministers "On Improving Planning and Increasing the Influence of the Economic Mechanism on Raising Efficiency of Production and Quality of Work," which provide for the development by USSR ministries and departments with the participation of councils of union republics and the establishment in coordination with Gosplan SSR of schemes of development and location of sectors of the national economy and sectors of industry, with account being taken of the conclusions of local organs of government. Such a measure not only will increase responsibility for the preparation of appropriate preplan documents but also will become another important form of coordination of sectorial and regional aspects of the plan.

It is also necessary to intensify work relating to the introduction of economic-mathematical methods and computers into planning practice not only at the republic but also at the oblast level, which will permit going to multi-option developments of regional-plan drafts. Special attention should be devoted to close interaction of oblast automated systems of planning calculations with the republic automated system of planning calculations. This will upgrade the quality of complex planning of regional economic and social development.

The decree of the CPSU Central Committee "On Further Improving the Economic Mechanism and Tasks of Party and State Organs" and the decree of the CPSU

Central Committee and the USSR Council of Ministers "On Improving Planning and Increasing the Influence of the Economic Mechanism on Raising the Efficiency of Production and Quality of Work" aimed economic activity at ensuring high end results and complex development of the economy as a whole and of individual economic regions. The attainment of the set aim is only possible with the able combination of sectorial and regional planning methods.

At the present time, a thorough, constructive study is being conducted in the republic of the main provisions of these important documents, and a system of measures has been designated for mobilizing the efforts of party, soviet and operational organs for ensuring their full implementation. Their practical realization will become in the immediate years ahead a fundamental direction of the work of planning, operational and finance organs both at the center and locally and in each production component. The timely and systematic accomplishment of all the provisions of the aforesaid decrees and the search for and employment of existing reserves guarantees new successes in the development of our economy and in the use of the objective advantages of the planned system of management of the economy.

Application to National Economy

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[Article by V. Mozhin, corresponding member of VASKHNIL, doctor of economic sciences: "Rational Coordination of Industrial and Territorial Planning and Management of the Economy"]

[Text] In the system of state management of the economy, both sectors of the national economy and regions of different level are objects of planned management. Over the course of the many-year history of the building of socialism in our country, sectorial and regional planning and management have played a varying role depending on the level of development of the economy and functions of the central and local organs of national-economic management. But from the very outset of the establishment of socialist planning, the unity of the national-economic plan required the combination of the sectorial and regional approach to management of the economy. This requirement became one of the basic methodological provisions of socialist management and planning. The principles of such a combination were rooted in the well-known plan of the GOELRO [State Commission for Electrification of Russia], which was worked out on the basis of an idea and under the direct supervision of V.I. Lenin.

The objective basis of the need of combining sectorial and regional management of the national economy stemmed from the unity of sectorial and regional forms of social division of labor. The sectorial and regional aspects of the development of productive forces are characterized by dialectical unity and interdependence; moreover, with the growth of productive forces this interdependence acquires an increasingly complex character. The economic and other interests of the sectorial and regional approaches far from always coincide. That which may be advantageous from the standpoint of separate sectors may not correspond to the interests of territorial unity and vice versa. The only proper criterion to objectively unify the interests of sectors and regional units exists in a statewide national-economic

approach to the solution of these or those problems which require combined sectorial and regional development stemming from a unity of the aims and tasks of socialist society. The violation of this combination inevitably leads to negative consequences and finds its expression in practical activity in such phenomena as bureaucracy and local favoritism. "Only the judicious combination of the sectorial and regional principles can ensure effective management," L.I. Brezhnev has emphasized.[1]

It should be noted that at different stages of development of our economy, the relation between planning and management in the implementation of the principle of combined regional and sectorial management of the national economy has varied, although both planning and management have always stemmed from this principle. Thus, during the period of the councils of national economy, when the regional aspect predominated in the management of the national economy, sectorial planning nonetheless survived although its role changed somewhat. The transition to the sectorial system of management increased the importance of sectorial planning, but this did not mean the elimination of regional planning. Thus, the principle of combined sectorial and regional planning is inherent in the various systems of management of the socialist economy, although, of course, the system of management exerts a strong influence on the relationship between these two aspects of planning. At the same time, the principle of combined sectorial and regional approaches remains firm because it has an objective basis.

Sectorial and regional planning have their specific tasks, subjects and methods.

The tasks of sectorial planning mainly consist of providing the national economy with products possessing certain use properties, boosting intensification of use of resources, rational specialization and concentration of production, establishing necessary intrasectorial proportions and carrying out a single technical policy aimed at growth of efficiency, cadre training and improvement of working conditions.

The tasks of regional planning are multifaceted. They include:

determination of the developmental prospects of each union republic and economic region from general state positions, keeping in mind that the USSR economy constitutes a single national-economic complex;

providing proportional economic development on the basis of complex use of regional resources of multipurpose designation and of the created production potential;

ensuring the harmonious development of the social infrastructure on the basis of the achievements of a common strategic goal--growth of the material well-being of the people;

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1. L.I. Brezhnev, "Leninskim kursom" [Leninist Course], Vol 7. Politizdat, 1979, p 621.

equalizing of the levels of economic development of the country's union republics and economic regions;

implementation of measures for protection of the environment from pollution and improvement of the ecological situation;

provision of a rational system of regional location of the population based on requirements of production and effective solution of social problems.

The subject of planning is determined on the basis of the formulated tasks. The subject of sectorial planning consists of the sum total of enterprises (associations) producing certain products; the subject of regional planning in its broad sense involves the whole complex of sectors of material production and the nonproduction sphere operating in a given territory. Among these sectors, two groups may be distinguished. For enterprises, institutions and organizations of sectors which are subordinate to higher organs (union subordination--for union republics, union and republic subordination --for autonomous republics, krays and oblasts), regional organs fulfill functions of coordination and control relating to questions coming within their jurisdiction.

The subject of directive regional planning relates to enterprises, institutions and organizations of sectors which are subordinate to the appropriate regional organs of management. In the industry of certain union republics, the relative share of enterprises, organizations and institutions of this group reaches 70-80 percent; the share is even larger for such sectors as agriculture and forestry, trade, consumer services, housing and municipal services. Thus jurisdictional economy [podvedomstvennoye khozyaystvo] plays plays a most significant role in the development of regional plans.

Regional planning is bound to contribute to the practicability and effectiveness of plans through a better balancing of the needs of all sectors on a territory and the territory's resources and multipurpose production operations--existence of labor resources, capabilities of the construction industry, deposits of mineral resources, local construction materials, production infrastructure and the nonproduction sphere. Based on sectorial projections, regional plans are at the same time meant to ensure their fuller realization.

The many years of experience of buildir, socialism have helped to develop a number of effective forms and methods of rational combination of regional planning and management.

In the preplan stage, wide use is made of elaboration of schemes of development and location of productive forces that validate a rational regional and sectorial structure for the economy:

forecasts of basic synthetic indicators of regional development on the basis of a demographic forecast, a forecast of natural resources, a forecast of scientific-technical progress and so on;

schemes of development and location of sectors of the national economy or groups of interconnection sectors of industry and agriculture;

schemes of development and location of the productive forces of union republics and economic regions.

The preplan document is a resettlement scheme providing for the development of resettlement systems, territorial disposition of the population with account being taken of the location of industry.

The aforesaid schemes serve as the basis for the implementation of rayon plans with whose help there is concretized the location of the economy and the population and the forming of a production and social infrastructure on relatively small territories. In the rayon plan, architectural-construction and engineering-technical factors are taken into consideration and a detailed physico-geographic characterization of the rayon is provided. The results of the rayon plan are used in the solution of urban-development problems and in the elaboration of such an important document as general plans of development of cities.

At the immediate planning stage, the territorial content of sectorial plans is of major importance to the rational combination of sectorial and regional social-economic development; it serves as the basis for rayon plans, inasmuch as with its help all-union tasks reach the rayon level that have to be resolved on the given territory and so do the resources for their accomplishment.

The tasks of rational combination of sectorial and regional principles must be fully solved in state plans of the economic and social development of union republics, krays, oblasts and autonomous republics. The regional plan system possesses a hierarchical character. With a lower level of planning, the role of general economic questions is reduced, the range of production ties subject to regulation in regional plans narrows down and the opportunities of finding a basis for interrayon economic ties is curtailed. In addition to his, increasing importance is attached to questions connected with the provision of social-cultural services for the population, the rational use of labor and natural resources, protection of the environment and development of the production infrastructure and key location of enterprises.

The dynamics of the socialist economy create the need for constant improvement of the system of administration, including forms and methods of combined sectorial and regional approaches to the management of the national economy. In analyzing the development of the economy at the present stage, we can disclose phenomena and processes which require strengthening of both the sectorial and regional principles in planning and management. Scientific-technical progress makes necessary increased specialization of production and high concentration of production of products of the same kind. There takes place on the basis of specialization further

differentiation of sectors and corresponding changes in management of the economy, and new sectorial organs of administration are created. The great effectiveness of specialization production and the requirements for the implementation of a unified technical policy dictate the necessity of bolstering sectorial planning and management.

On the other hand, specialization and an increased number of sectorial operational organs give rise to a tendency to integration of sectorial management and therefore of planning. At the 25th CPSU Congress, L.I. Brezhnev said: "The question of creating a system of administering groups of similar sectors also requires a solution."[2] Such a need for integration of management arises not only at the national-economic level but also in republics, oblasts, krays and economic rayons, for fragmentation in management and planning at the local level leads to unjustifiable expenses and losses due to a noncomprehensive solution of large economic problems. The development of narrow sectorial specialization gives rise to the creation of servicing production operations of an intersectorial regional character on a territory and consequently to a corresponding change in planning and management.

Other objective factors also exist intensifying the role and importance of regional planning and management, first of all growth of the social orientation of adopted decisions. The number of social problems is growing, and they are becoming increasingly complex. A portion of the social questions is solved in the sectors (improvement of conditions and safety of labor, elimination of physical difficult and unattractive jobs and so on). But the whole complex of conditions of social-cultural and housing-municipal character which must be developed harmoniously at the places where people live can be secured only on the basis of an intersectorial and regional approach to planning and management. Moreover, tasks relating to the problem of protection of the environment and rational utilization of labor and natural resources in individual territorial units are becoming increasingly complex.

Thus, the processes developing in today's economy demand a more efficient combination of the sectorial and regional approaches to economic management. Violation of this principle, as has already been noted, gives rise to disproportions and leads to significant national-economic losses. The most frequent disproportions are found in the inadequacy existing between the created work places at enterprises of the different sectors in some territorial units and the possibilities of providing them with manpower. Guided by the opinion that "with capital investment, labor resources would be found," some sectorial departments build new enterprises and expand existing ones there where labor resources have been exhausted, hoping to attract manpower from other regions. Of course, in that case when reference is

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2. ?Materialy XXV s"yezda KPSS" [Materials of the 25th CPSU Congress]. Moscow, Politizdat, 1978, p 61.

made to development of new territories for the purpose of drawing needed natural resources into economic turnover, the drawing of manpower from other regions becomes inevitable. But since on the whole growth of labor resources is being sharply curtailed at the present time, the creation of additional work places without taking into account the possibilities of providing them with manpower results in many rayons in the underuse of newly operation production capacities and unwarranted cadre turnover, which in its turn has a negative effect on labor discipline. The main reason for this is the absence of coordination between sectorial and regional organs in regard to the use of labor resources, which in their character are not a sectorial but an intersectorial source.

Another problem requiring a more precise coordination of sectorial and regional administrative organs is that of the complex approach to the planning of production and nonproduction spheres. Disproportions between these spheres and the lag of nonproduction construction are particularly sharply felt in newly developed rayons, especially in those rayons where new regional-production complexes are being formed.

The necessity for better coordination of sectorial and regional interests is also felt in the solution of such a problem as resettlement. Despite appropriate decisions, the process of concentration of production in large cities is continuing, which complicates many problems of their development; the economic base of small and medium-size cities grows inadequately, and their resources are underused. Of a total population growth of 63 million persons during 1959-1969, 80 percent (49 million persons) are in large cities. This is to be explained by the interest of ministries and departments in using the created infrastructure in the creation of new enterprises and the expansion of existing ones, thus achieving savings in capital investment. The fact is that the production and social infrastructure becomes an increasingly important factor in location of production. This is to be explained by increasing outlays for the creation of infrastructure facilities, especially of a social character, for the purpose of creating more favorable conditions for the life of the population. At the present time the fixed capital of sectors of the infrastructure have a value exceeding one half of all fixed capital of both production and nonproduction use concentrated in cities. Facilities of the infrastructure employ more than one-third of all workers. The relative share of this or that indicator display a growing tendency. Thus, the infrastructure is an important element in the economic development of regions and its location to an increasing degree influences the territorial organization of the economy. In particular, the progressiveness of such a form of organization of regional economy as regional production complexes [territorial'no-proizvodstvennyye kompleksy (TPK)] is to a significant degree based on the fact the effect is achieved through economies resulting from the creation of general regional-infrastructure facilities.

At the same time, the bureaucratic approach to the creation of infrastructure facilities being practiced at the present time results in a

considerable overexpenditure of funds. This is especially experienced in the building of new cities. For example, at Tynda--one of the main cities of the Baykal-Amur Main Line--the various departments built several tens of boiler houses, although a city of this population size would find adequate a rather well-equipped heat station. As the result of departmental disconnection, state funds are being significantly overexpended and the necessity is arising for bringing in additional manpower into a region with an acute shortage of labor resources.

In this connection, I wish to emphasize that practical life increasingly demandingly calls for the solution of the problem of division of funds allocated for production purposes and for the creation of an infrastructure (first of all a social one) between sectorial and regional organs of management. Funds allocated for the social infrastructure of cities and villages must be directly intended for the satisfaction of workers' needs and turned over as a rule to regional organs of administration. Ignoring of the differences in the forming of the production and social infrastructure results in a city frequently being an aggregation of plant settlements with unfavorable living conditions for the population.

An insufficiently consistent realization of the principles in the combination of sectorial and regional planning and management has another dark side. It is connected with such a phenomenon as the tendency to "naturalization" of the economy, the desire, on the one hand, of departments to inevitably provide their own auxiliary production facilities and, on the other hand, of territorial-administrative units to manufacture products for the satisfaction of local needs directly at their "own" enterprises, although such production costs more. As a result of this, the processes of specialization and rational interregional division of labor suffer. In our view, those economists are right who believe that the output of homogeneous products should be principally organized vertically (sectorial specialization) and of auxiliary production--horizontally, that is, territorially.

Of major significance to the further improvement of planning and management is the inclusion in the new USSR Constitution of a number of provisions that secure principles of management of the economy, rights and obligations of sectorial and regional organs of management developed over many years of practice in the building of socialism. Article 15 of the USSR Constitution postulates that management of the economy is on the basis of state plans of economic and social development with due account of sectorial and regional principles. The Constitution, subsequent legislative acts and the new version of the Law on Rayon and City Soviets of People's Deputies define the tasks of union and autonomous republics and local organs of government as having to provide complex economic and social development of their territory.

The main directions in the field of improvement of planning determined by the 25th CPSU Congress and formulated in constitutional provisions are

disclosed and concretized in the decree of the CPSU Central Committee "On Improving Planning and Increasing the Influence of the Economic Mechanism on Raising Efficiency of Production and Quality of Work."

The rational combination of sectorial and regional development is considered in the above-mentioned decree as one of the most important tendencies in improvement of all planning work. The decree makes more precise the functions of regional organs in planning and the obligations of ministries and departments in the development of regional plans. USSR ministries and departments are under the obligation of seeing to it that subordinate enterprises are provided with control figures, basic indicators of drafts of plans and, finally, approved plans for local planning organs. The subject range of regional planning has been expanded. For each regional production complex in the regions of Siberia and the Far East there is envisaged the approval of the chief indicators of economic and social development for planning regardless of the departmental subordination of the production associations and enterprises.

Of major importance to the improvement of regional planning is the working out for a territory as provided by the decree of balances of labor resources, monetary income and expenditures of the population, territorial balances of production and distribution of the most important products. Territorial organs have the job of compiling and approving consolidated annual and five-year plans for production of local construction materials, producing consumer goods and plans for housing-municipal and cultural-everyday construction. It is especially emphasized that state plans of economic and social development not only of sectors but also of all administrative-territorial units--union and autonomous republics must include developed sections for the entire complex of measures in the field of social development coordinated with tasks for development of production, capital construction and improvement of their efficiency.

The realization of the adopted decree calls for much methodological work, which is being done at the present time. It provides for the development of methodological instructions for the compilation of regional goal programs and territorial material balance of production, distribution of production, compilation of schemes for the development and location of sectors and schemes for the development and location of productive forces of union republics and others.

No less important is the development of methodological instructions for the compilation of complex plans of economic and social development for different level territorial units, which are to carry out tasks set by the USSR Constitution for republic and local organs.

Goal programs for the solution of major regional problems are to play a positive role in improving the combination of sectorial and regional planning. The subject of programmed complex planning is to be intersectorial problems of priority importance for the country as a whole or for its

individual regions from the point of view of effective attainment of end results. Program preparation and accomplishment presupposes a high level of concentration of material and financial resources required for the solution of the problems. Implementation of the programs should provide for improvement of existent territorial proportions.

The progressive form of combining sectorial and regional development exists in regional production complexes. By regional production complex is meant a plan-formed interdependent combination of enterprises of different sectors of the national economy on a certain limited territory. Such a method of complexing under conditions of existing economic interrelations creates a basis for increased intensification and efficiency of production. Significant economies in capital and current outlays in regional production complexes are attained through the creation in them of common facilities of the production infrastructure for all enterprises (transport, communications, warehousing, power and water-supply structures).

Further improvement in the combination of sectorial and regional development demands a systems approach to the problem, that is, development of measures comprehensively encompassing questions of both planning and of economic stimulation and organization of management. Such a task is set in the decree of the CPSU Central Committee "On Further Improving the Economic Mechanism and the Tasks of Party and State Organs," which provides for the development of proposals aimed at further improvement of the organizational structure of management, including improvement of sectorial and regional management and increasing the role of soviets of people's deputies in economic construction.

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QUESTIONS RAISED ABOUT QUALITY CONTROL OF NEW TECHNOLOGY

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[Article by V. G. Shteyngauz]

[Text] The article examines patterns in the creation of product quality and the effect which the law of rising needs has on that process, introduces the category "socially necessary level of quality," and demonstrates its interrelationship with socially necessary labor expenditures and efficiency. The author reveals the possibilities for improvement of quality control of new technology by means of an efficiency that expresses the final results accruing to the national economy from improvement of quality.

The high level of the Soviet economy's development and the contemporary scientific-technical revolution are creating favorable opportunities for production of high-quality products. A number of steps have been taken in our country in recent years to solve the problems in raising the quality of the products produced. But the opportunities in this field have not been exhausted by any means. Since a number of problems have been left unsolved and sufficient study has not been made of certain aspects of this problem, the quality of many products is still lagging behind the needs of the economy, the country's population and the requirements of the world market. This is having an impact on the growth rates of social production and on its efficiency. Taking into account that improvement of quality reserve constitutes a major potential source of growth in the efficiency of social production, one which would help to achieve the main goal of a socialist economy's development—fullest satisfaction of the material and cultural needs of the people, the 25th CPSU Congress paid particular attention to the problems of improving the quality of the products produced. The documents of the congress pointed out the need for "decisive improvement of the quality of all types of products produced, expansion of the assortment, and augmentation of the production of new products meeting present-day requirements. A rise in the proportion of products in the superior-quality

category to the total volume of output. Broader introduction of comprehensive product quality control systems."*

In the years of the 10th Five-Year Plan definite success was achieved in performing this task, and the number of products corresponding to the most recent advances of science and technology increased.

In the first half of 1979 alone the planning target for production of products bearing the state Quality Emblem for the industrial sector as a whole was fulfilled at a level of 109 percent. The proportion of products in the superior-quality category to the total volume of production reached 13.3 percent in the first half of 1979 (as compared to 11.7 percent in the corresponding period of the previous year), and in machinebuilding it was 32.1 percent. In that time products bearing the state Quality Emblem represented more than 50 percent of output at 509 production associations and enterprises.

During the 10th Five-Year Plan the proportion of products in the superior-quality category to total output was to increase 4-5-fold in just the leading machinebuilding industries (twofold for the industrial sector as a whole), 5.3-fold in machine tool building, fourfold in instrumentmaking, 3.8-fold in chemical machinebuilding and 3.4-fold in heavy machinebuilding. Improvement of product quality was given one of the central places in the decree of the CPSU Central Committee and USSR Council of Ministers entitled "On Improving Planning and Increasing the Impact of Economic Instruments on Production Efficiency and the Quality of Performance," in which emphasis is put on the need "to achieve a substantial rise in the efficiency of social production, to speed up scientific-technical progress and the rise of labor productivity, to improve product quality and on that basis ensure a steady upsurge of the country's economy and the Soviet people's prosperity."** The decree envisages a substantial bolstering of the impact of economic instruments on improvement of product quality. In 5-year and annual plans of ministries, associations and enterprises the growth of production of products in the superior-quality category is introduced as an indicator which will regulate material incentive funds. In order to give producers greater incentive to produce highly efficient new products an incentive premium is to be applied to the wholesale price, and up to 70 percent of the additional profit the association or enterprise obtains by virtue of these premiums is credited to economic incentive funds.

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* "Materialy XXV s"yezda KPSS" [Materials of the 25th CPSU Congress], Moscow, Politizdat, 1976, p 168.

** O dal'neyshem sovershenstvovanii khozyaystvennogo mekhanizma i zadachakh partiynykh i gosudarstvennykh organov, Ob uluchshenii planirovaniya i usilenii vozdeystviya khozyaystvennogo mekhanizma na povysheniye effektivnosti proizvodstva i kachestva raboty [On Further Improvement of Economic Instruments and the Tasks of the Party and Government Agencies, On Improving Planning and Increasing the Impact of Economic Investments on Production Efficiency and the Quality of Performance], Moscow, Politizdat, 1979, p 7.

At the same time strict penalties are instituted for the manufacture of outdated articles classified in the second-quality category.

Further study of methodological and theoretical problems related to improvement of product quality has great importance in performing these tasks. Yet there are certain difficulties in this field resulting from the insufficient treatment of many aspects of the economic theory of quality.

First of all, we lack a sufficiently straightforward definition of product quality as an economic category, one that would describe it as a social relation in a producer-consumer system; there has been little study of the problems of interaction between product quality and other economic categories or the patterns of its creation in the production process; many economic factors which stand in the way of higher product quality are still unclear; it has not been established in what stages of the process of creation of product quality its reduction occurs, and so on. The unanswered questions stand in the way of building a unified and efficiently operating system of product quality control throughout the national economy, extending over social production as a whole and based on general methodological principles, which in turn is having an adverse effect on the scientific level of practical conclusions and recommendations.

We will discuss problems related to the process of creation of the quality of new technology, we will examine the patterns of that process, and we will attempt to discover unused potential for its improvement.

The process of creating product quality has its inherent patterns and peculiarities which have yet to be studied very much and which are not sufficiently taken into account in the practice of product quality control in the national economy. It is looked upon as an integral and unbroken process taking place at all stages of creation of new technology, from the research and production to the large-scale distribution of technology in the economy, along with the complicated relations and interactions among these stages.

As we know, the result of the introduction of new technology is that society receives the socioeconomic benefit which was the purpose of creating that technology. And the extent to which the potential benefit of scientific and engineering developments carries over to the real benefit to the national economy depends on the degree of refinement of the process of creating its quality. To effectively manage the process of shaping the quality of new technology (as is the case with any other economic process), we first must know the objective patterns in the flow of this process and take them as points of departure in the management effort; second, we must be able to determine the desirable parameters of that process; and third, we must be able to create the economic conditions that guarantee that it takes place with the parameters that were chosen. Yet when recommendations are drafted for improvement of the system for product quality control the patterns of this process have not always been sufficiently taken into account, and this has adversely affected management of the process.

As a socioeconomic category product quality cannot be adequately defined either from the standpoint of value taken separately (value ultimately reflects expenditures of socially necessary labor, not the use value itself, much less differences within it, and it cannot indicate how a particular need is satisfied), or from the standpoint of use value. Product quality is a difference within the framework of a specific use value, and its improvement does not alter the use value, i.e., the ability to satisfy a certain need. In our view product quality should be examined from the standpoint of unity and interaction between use value and value. As a socioeconomic category "quality" figures as a social relation in the producer-consumer system. Product quality is shaped during production, and its socioeconomic results are realized in consumption; quality is a category turned toward the consumer. The economic nature of raising product quality lies in ensuring a rise of requirements, a rise of labor productivity, and reduction of expenditures of labor to meet the same requirements. The ultimate benefit to the national economy from improvement of quality is expressed in higher efficiency of social production and satisfaction of the same needs at the cost of smaller expenditures of resources in the context of higher needs resulting from improvement of quality. The economic purport of the improvement of product quality is that the costs of raising it must be smaller than the useful benefit achieved thereby.

A complex interrelationship obtains between product quality and production efficiency. Product quality is a dynamic category. It is constantly rising, thereby manifesting the operation of the law of rising needs. In any given period of time there will be for all products the socially necessary level of quality and the socially necessary costs corresponding to it. In time a new and higher socially necessary level of quality is formed as a result of a further rise in product quality (both in our own country and abroad). Moreover, in the initial period production of the higher-quality product requires additional expenditures, but later when this product quality becomes socially necessary, the additional expenditures, which previously exceeded those which were socially necessary, come to fit within the socially necessary expenditures. The socially necessary expenditures thereby increase unless a corresponding rise of labor productivity occurs.

At any given moment of time there is also a certain lower limit of the socially necessary level of product quality beyond (below) which no production costs will be justified, for the product does not have use value, is not able to satisfy advancing needs, which have risen.

So, socially necessary expenditures of labor to produce any product come about under the influence of two opposing tendencies: the rise of labor productivity tends to reduce them in units of satisfaction of the same need, but the rise of needs, manifested in a rise of the socially necessary level of quality, tends to increase expenditures for more "quality" satisfaction of the given need.

Quality as a category has multilevel connections with production efficiency and satisfaction of needs.

First of all, improvement of quality does not always result in better satisfaction of a given need; it might result in a reduction of social expenditures to create a given use value, thereby making funds available for fuller satisfaction of other needs or for improvement of the quality of a different product (such is the case with the length and service life of new technology, for example, motor vehicles, television sets, light bulbs, and so on). Here quality is manifested as the ability to retain use value, to satisfy the same needs as before over a longer time (needs at an unchanged, stable level). The advisability of improving quality in this case is determined from a comparison of the relevant expenditures required and the economic benefit obtained. It is ensured thereby that efficiency will rise because of a drop of unit costs in meeting needs that are equal in volume and quality.

At the same time there is also another far more complicated expression of quality and of its interaction with efficiency. One of the principal manifestations of the scientific-technical revolution lies in a rise of quality which makes it possible to satisfy needs more diversely or at a higher level. The most vivid example is the advent of color television. In this case improvement of quality does not result in satisfaction of a need that is larger in volume; the need is satisfied within the previous dimensions, but it is satisfied at a new and higher level, i.e., with better quality. But the same physical volume of output as before needs to be produced for a need that is equal in volume: 100,000 black-and-white television sets cannot be replaced, say, by 70,000 color sets or 2 million pairs of outmoded footwear by 1 million pairs of high-quality footwear.

This direction in the improvement of product quality brings about a rise of needs; there is a change in the very need as such. The higher need cannot be satisfied by the old quality. The socially necessary level of quality is rising, and a product which does not meet this new level ceases to be a carrier of use value. Accordingly, all expenditures for its production prove to be "worthless" and futile; they are not acknowledged as socially necessary. The greatest losses of efficiency related to product quality seem to be occurring at present because of its low level, a level "which does not attain" the socially necessary level. That is why one of the most important conditions for raising the efficiency of social production is a constant improvement of quality of all products capable of ensuring a faster rate of growth of the socially necessary quality, which is shaped under the impact not only of domestic production, but also of the level of product quality in countries with the highest development of science and technology. Experience in world trade demonstrates, for example, that if a product's quality is 50 percent below the world level, it is not in practice possible to sell it, and if it can be sold, then the price will not cover even the cost of the raw materials that went into it.*

* Kotlikov, Ya. Sh., "Na uroven' mirovykh obraztsov" [At the Level of World Exemplars], Moscow, Politizdat, 1977, p 20.

What we have said means that in the process of quality's movement within the limits of any use value there are two principal stages. In the first stage a product is created whose quality exceeds the socially necessary level. The new progressive level of quality still has not become the socially necessary level, and as a consequence the additional costs of creating it, which exceed the socially necessary expenditures, do not fit within the latter. Improvement of quality in this case entails rising costs relative to the need which is satisfied (it is still the same as before, but the product quality has already "outstripped" it). But this rise in costs is socially necessary (though these additional costs themselves do not fit within the socially necessary expenditures for a certain time). In a sense these are expenditures made to increase the need and which are necessary to formation of the new level of product quality in society. That means that these expenditures are efficient from the standpoint of the more or less long-range outlook of social production. Their socially necessary character is determined by the fact that if these additional funds are not invested, the quality of the product produced will sooner or later lag behind the constantly rising needs, and society will deny recognition of the usefulness of all the costs of producing that product.

In the second stage the new level of quality becomes socially necessary, and this means that the costs it entails fit within the socially necessary expenditures. At first it would seem that society has reconciled itself to the rising costs per unit satisfaction of the same needs (in this case we are deliberately avoiding the influence of a rise of labor productivity on costs). But in essence the rise in efficiency occurs thanks to improvement of product quality, since now efficiency must be evaluated in terms of satisfying a need that is the same in its volume but is qualitatively different and higher (at a higher level of quality). The base used in calculating efficiency changes, in time, because of operation of the law of higher needs for it, the level of socially necessary expenditures goes still higher unless it is compensated by a faster growth of the productivity of social labor.

Dynamic unity of value and use value is observed in the process of improvement of product quality. The actual possibility of improving product quality, which is embodied in its physical form, is determined by society's possession of resources which it can spend for those purposes. At the same time a rise in production efficiency is a result of the rise in quality (changes in the physical form of the product of labor). Thus a rise in product quality may occur in the national economy only to the extent of the rise in the efficiency of social production, which in turn is largely determined by improvement of quality.

For all the diversity of changes in the physical form of the multitude of articles making up the gross social product which take place as their quality improves, its ultimate result is a rise in efficiency. That is why improvement of product quality should begin with efficiency, efficiency being taken as the basis for planned quality control. Recently there have been

attempts to set up product quality control on the basis of a thorough description of its technical parameters and performance characteristics. To be specific, this is the basis of the entire system of certification, which is only to a small degree related to efficiency. But no description of a product from the physical standpoint can be complete for the entire set of products. Quality must be controlled through the efficiency attained thanks to improvement of the performance characteristics of products, through the motivation of its creators and manufacturers to maximize the benefit, i.e., control should be effected through the final results from the standpoint of the national economy. It, of course, must rely on the objective patterns of the formation of quality.

The process whereby product quality is formed goes through a number of successive independent, but interrelated stages and takes a fairly long time. These stages coincide with those that exist in creating, preparing the production and manufacturing new products. Each of them performs its particular functions as product quality is formed, and in each of them it may be improved or, on the contrary, detracted from. The process of the formation of quality, as the sole object of control is characterized by the interdependence of the separate stages. In each stage not only does product quality depend on activity in the previous stage, but it also affects all subsequent stages. Poor quality of the design, for example, practically nullifies excellent quality of a product's manufacture, any operation poorly performed in the manufacturing stage siphons up all the previous work done to ensure quality. The division of the shaping of quality into stages predetermines the important role of ensuring effective interaction among the organizations involved in creating and manufacturing a product; moreover, at the junctions between organizations quality is also often lost through delays in accomplishing links and reaching agreements. There is at present a sizable difference between the quality of consumer goods exhibited at fairs and reaching store shelves or between equipment manufactured for export and the so-to-speak ordinary equipment for domestic use. In this case losses of quality have occurred in production or at the junction between the developers and the manufacturers. Consequently, in controlling product quality an influence must be exerted both on the separate stages in creation of new technology, where the level of its quality is shaped, and also on the interaction between those stages.

The process of shaping quality has a number of inherent characteristics and peculiarities. It begins with adoption of the decision on the level of quality of the product proposed for manufacture. The level of quality which is to be embodied in the design is affected by numerous external factors (for example, the need for the new product, availability of the raw materials base, the requirements of customers, and so on) and internal factors (capabilities of production equipment, existing manufacturing methods, the planned volume of costs). The decision on selection of the quality level of the article which is to be manufactured is taken on the basis of an analysis of the costs required to achieve that level on the basis of maximum efficiency, i.e., the maximum useful benefit at the minimum cost

on the basis of existing needs. The specific nature of the process of the formation of quality lies in the fact that it must display a certain flexibility in order to react speedily to a change in the consumer's requirements. At the same time this process possesses a certain inertness as compared to the process of quantitative augmentation of the volume of output of products at the established level of quality. This inertness is manifested in the fact that a change in the level of quality of new technology signifies above all a change in the quality of the design, which necessitates not only additional costs, but also time to make changes in the finished product (especially if the changes are fundamental). That is why the level of quality designed in the finished product lags behind the current requirements of the consumer.

So, determination of the optimum level of a product's quality and its embodiment in the design represent an exceedingly important stage in the formation of quality. All subsequent activity of the industrial enterprise is aimed at attainment of the given level of quality, i.e., at ensuring quality of manufacture.

The stage of experimental design and development, in which the foundations of quality are laid, has the leading role in the shaping of the quality of new technology. In subsequent stages (putting the new product into production, actual manufacture, and use) they can be improved somewhat as a rule, but shortcomings in development of new technology cannot be substantially offset to any degree or made up for later on. Sizable losses in quality of new technology, and consequently, losses in terms of the benefit, may also occur because of a defect in the design or development. But even the highest level of development of the design of new technology does not guarantee that its corresponding quality will be attained in the end. It may be "lost," for example, in the production process. The imperfectness of the manufacturing plant's manufacturing methods and equipment, inadequate worker skills, poor organization of quality monitoring, use of low-quality materials and many other causes not uncommonly result in the manufacture of a poor-quality product, even though it was manufactured on the basis of the best designs.

So, the kind of foundation for the quality of new technology, the basis of its future level, is laid in the product development stage. In the subsequent stages this initial level of quality can be raised or lowered. The essential thing, however, is that in the subsequent stages there are fewer opportunities to improve quality, though in each stage there are many possibilities for its loss. For instance, it is difficult in production to make up for defects in the design, but there are many ways to spoil execution of even the best design in metal.

It follows therefore that in the process of controlling quality experimental design and development is the initial and also most important stage, the stage in which the foundations are laid for the qualitative level of the product. It is in fact here that the impact of economic instruments

for improvement of quality should be aimed. At the same time it is indispensable to ensure reliable relations between all the stages in the formation of quality, relations which ensure a high level of motivation and responsibility of all the organizations participating in creating, putting into production and manufacturing the new technology, in preserving the projected level of its quality and even improving it when possible. Quality control must be oriented toward the final results of the national economy and should be performed on the basis of them--the final results, or efficiency, as their general expression, should be set up as the indicator of the quality of new equipment throughout all the stages of its formation (we are referring to an efficiency which takes into account the rise of needs).

It seems to us that the principal reason why low-quality equipment is produced, and the same applies to other products, is that in the period before publication of the decree of the CPSU Central Committee and USSR Council of Ministers dated 12 July 1979 the product's developers and manufacturers did not have sufficiently high motivation to maximize the efficiency of the products produced from the standpoint of the national economy. The main reason was that cost indicators reflecting the level of consumption of economic resources, material resources above all, rather than the final results for the national economy, where the basis of indicators used to evaluate economic performance. Indicators based on gross production guided the activity not only of industrial enterprises, but also of project planning and design organizations--fulfillment of their plans was determined according to expenditures of funds (volume of work done), rather than in terms of final results. Moreover, inadequate development of the system of mutual responsibility of organizations participating in the various stages of creation of new technology and accordingly of the formation of its quality had its impact as well. In practice, then, no one bore any sort of serious responsibility for losses of quality in the stages following the product development stage.

Overcoming all these shortcomings requires reorientation of the system for planning and stimulating the quality of new technology toward attainment of maximum efficiency of the product produced from the standpoint of the national economy in accordance with the basic principles of the decree of the CPSU Central Committee and USSR Council of Ministers entitled "On Improving Planning and Increasing the Impact of Economic Instruments on Production Efficiency and the Quality of Performance." Transformation of the indicator of growth of production of products in the superior-quality category into one of the principal planning targets and fund-regulating indicators, substantial bolstering of incentives for the manufacture of high-quality products, and the system whereby enterprises and associations will plan the economic benefit from performance of scientific-technical measures over the 5-year period should have an important role in this respect.

Achievement of maximum efficiency of any product, including new technology, absolutely presupposes that its quality be high. But in the product development stage the efficiency of new technology exists only as potential

efficiency; its value depends on the quality of the design. At the same time it is related to actual efficiency, ultimately it becomes it, and the latter depends on the initial potential efficiency, which it may fall short of, but may not exceed. That is why the product development stage, in which the level of future actual efficiency is set forth, should be oriented toward maximizing the potential benefit, which is impossible without improving the quality of the product. To that end it is indispensable that the basic planning indicator for project planning and design organizations should be the potential efficiency of the technology being developed, and they should have corresponding incentives as a function of the value of the potential efficiency created for the year or the 5-year plan (sum total of potential efficiency for all development projects completed during those respective periods and accepted for application). Assessment of the performance of project planning and design organizations on the basis of the criterion of potential efficiency will strengthen their motivation to improve the quality of the technology created and will make it possible to compare the performance of different organizations.

Essentially what we are saying is that in the transition of scientific research and project planning and design organizations of industrial ministries to cost accounting in accordance with the decree of the CPSU Central Committee and USSR Council of Ministers dated 12 July 1979 and in the organization of their operation on the basis of job orders, in which the economic benefit of new technology created from the standpoint of the national economy is to be determined as one of the final results, efficiency should be taken into account when the overall assessment is made of their activity in accordance with assessment of individual projects. The basis of this assessment, in our opinion, should be the potential (calculated, anticipated, and confirmed by extradepartmental expert evaluation) benefit to the national economy, since it is well known that the major part of the actual benefit will be realized in the process of the new technology's operation and ordinarily over a period of 7-10 years or more. Moreover, a part of the potential (calculated) benefit may be lost not because of circumstances that depend on project planning and design organizations (for example, low quality of manufacture, inappropriate equipment, inconsistent manufacturing methods, and so on), for which the developer of the new technology ought not to bear the responsibility.

In addition to adoption of this indicator, it is also advisable to institute certification of the quality of performance of product development. This certification should be the first and in a sense initial phase in the overall state system of product quality certification. It would be good if one and the same criteria for evaluation were used when possible in the basic certification as in evaluating the quality of the finished product, since it is important to maintain maximum continuity between the initial and final stages of certification, i.e., between certification of the design and certification of the finished product. In certifying development projects the principal indicator used to evaluate quality should be the potential efficiency of the new technology from the standpoint of the national economy (over its entire service life and relative to the volume of

its manufacture), while in the case of certification of the finished product it should be actual efficiency. Certification of development work should envisage a comparison of the technology designed with respect to its parameters and efficiency with the analogous technology manufactured for the same specific purpose (both in our country and also abroad), and also with promising technology which might be created by the time the technology which has been developed goes into production and during the period of its manufacture.

Adoption of potential efficiency of new technology as a plan indicator for development organizations presupposes that it be linked to actual efficiency. As we have already noted, the potential efficiency achieved in the development stage may be "lost" in the subsequent stages of the formation of product quality, and as a result actual efficiency will be far lower than potential efficiency. This means that planning the activity of project planning and design organizations would be based on real indicators, there would have to be conditions whereby all organizations participating in creation of new technology would be motivated to preserve the potential benefit incorporated in the design. We believe this can be achieved if efficiency is planned from start to finish through all the stages of creation of new technology and if a system is set up for mutual responsibility of all organizations for preservation (maintenance) of the initial or designed level of efficiency of the new technology.

In the first approximation such a system could operate as follows. When the quality of the development is certified, its potential efficiency, which has been consented to by the organization participating in the subsequent stage of creating the new technology, is stated. Then this efficiency becomes a planning standard for the organization performing the next stage. If that organization does not safeguard the original level of efficiency (after establishment of the potential efficiency agreed on between those performing the two related stages, responsibility for its preservation passes on to the organization performing the next stage), a certain portion of incentive funds is lost. Thus the connection is maintained among all organizations participating in the creation of the new technology, and they are motivated to a maximum degree to preserve or even augment the benefit contained in the design, i.e., to transform the potential benefit into actual benefit without losses.

The conversion of scientific research, project planning and design and process engineering organizations of industrial ministries to the cost-accounting system of organizing the work of creating, putting into production and applying new technology on the basis of job orders (contracts), in which the value of the expected benefit to the national economy is to be set forth as one of the principal final results, is an exceedingly important condition for achieving this kind of system of relations between developers and manufacturers of new technology.

Further improvement of product quality control, which is one of the main prerequisites for increasing the efficiency of social production in the context of the scientific-technical revolution, requires that the main patterns in the formation of quality of new technology be taken into account, that a consistent approach be taken to its quality, which should be regarded as a dynamic category developing in time. It becomes of fundamental importance in this connection to take into account the requirements of the law of rising needs, which has a decisive impact on the formation of product quality and the level of socially necessary expenditures to produce it, and consequently, is most directly related to the efficiency of improvement of quality.

Only if the operation of this law is taken as the point of departure is it possible to improve the present methods of evaluating the efficiency of improving the quality of new technology and to raise the level of scientific soundness of selection of the principal directions in which the quality of new technology is to change.

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